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09/820,688	03/30/2001	Koji Naito	018987-032	8787

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EXAMINER	
THOMPSON, JAMES A	

ART UNIT	PAPER NUMBER
2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/820,688	NAITO ET AL.	
	Examiner	Art Unit	
	James A. Thompson	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-7,9-13,15-20,22-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 19 December 2008 have been fully considered but they are not persuasive.

Regarding page 13, line 1 to page 15, line 11:

Applicant argues that Evans (US-6,577,746 B1) does not teach or suggest the claimed storage unit that stores the detected pieces of additional information in association with location information thereof. Applicant further argues that the location referred to in Evans is the location where image data contained in the watermark is subsequently to be inserted into the document, and does not indicate that the watermark includes storage information concerning the location of where the watermark is embedded in the image data.

Examiner replies that the particular placement (in other words, location) of the watermark is detected and corresponding state information is produced [see column 2, lines 61-65 of Evans]. The state information is stored, which is evidenced by the fact that the state information later used to insert a pristine and/or updated copy of the watermark in the same position and orientation.

As to Applicant's assertion that the watermark does not include storage information concerning the location of where the watermark is embedded in the image data, Examiner simply replies that such a feature in not recited in claim 1. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claim 1 specifically recites *inter alia* "a storage unit that stores the detected pieces of additional information in association with location information thereof." Claim 1 requires that the storage unit stores the additional information *in association* with location information. Claim 1 does not require that the additional information must itself contain the location information. The

location information can be separately generated and stored in association with the additional information, and still satisfy that particular requirement of claim 1.

Applicant argues that Evans does not teach that the watermark location is directly related to the location of the imported image.

Examiner replies that the "imported image" is the image that is to be newly watermarked in the same location as the originally detected watermark [see, *e.g.*, column 2, line 65 to column 3, line 6 of Evans].

Applicant argues that claims 7, 13, 20 and 26-28 are allowable for similar reasons as those given for claim 1.

Examiner replies that, since claim 1 has been demonstrated to be obvious over the prior art, claims 7, 13, 20 and 26-28 cannot therefore be deemed allowable merely for similar reasons.

Regarding page 15, line 12 to page 18, line 10:

Applicant argues that at least the detected image and watermark ID do not relate to the location information of the detected pieces of additional information are embedded within the image data.

Examiner replies that the location and orientation of the detected watermark image are used so that the pristine and/or updated copy of the watermark can be embedded in the same location with the same orientation [see column 2, line 65 to column 3, line 6 of Evans].

Applicant argues that the disclosure in Ikenoue (US-5,987,127) of inserting an updated generation code in a new location does not relate to the case where the analyzing unit judges that any of the detected pieces of additional information does not include predetermined information that is updatable.

Examiner replies that, even when there already exists a generation code, the generation code itself is not updatable. An new generation code may be *added* at other locations, but the older generation

code(s) cannot themselves be updated. Thus, the analyzing unit would judge that the detected pieces of additional information do not include predetermined information that is updatable.

Applicant argues that claims 3-6, 9-12, 15-19 and 22-25 are allowable due to their dependencies from an allowable independent claim.

Examiner replies that, since the independent claims have been shown to be obvious over the prior art, claims 3-6, 9-12, 15-19 and 22-25 cannot therefore be deemed allowable merely due to their respective dependencies.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 3, 5-7, 9, 11-13, 15, 17-20, 22 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US-6,577,746 B1) in view of Ikenoue (US-5,987,127).

Regarding claims 1, 7, 13, 19, 20, 26, 27 and 28: Evans discloses an image forming apparatus (figure 1 of Evans) equipped with an image processing apparatus (figure 1 of Evans) that processes inputted first image data so as to output second image data, the image forming apparatus forming an image according to the second image data (column 3, lines 13-28 of Evans – *document image [first image data] input, and detected picture replaced with pristine picture to form updated document image [second image data] that is output*), the image processing apparatus comprising: a detecting unit (figure 1(18) of Evans) that detects all pieces of additional information (*detected picture, watermark and watermark ID data*) that are embedded in the first image data (column 2, lines 7-14 of Evans); a storage unit (figure 1 (16) of Evans – *or other inherently present computer memory needed to store information for processing*

(see column 4, lines 20-24 of Evans)) that stores the detected pieces of additional information in association with location information thereof (column 2, lines 25-35 and lines 61-65 of Evans – *location of detected picture, which is part of additional information, determined and used to update with pristine version of detected picture; watermark and watermark ID embedded in detected picture [column 2, lines 7-10 of Evans]*); an analyzing unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding analyzing functions*) that analyzes the detected pieces of additional information and judges whether any of the detected pieces of additional information includes predetermined information that is updatable (column 3, lines 29-39 and lines 47-51 of Evans – *if a picture, which includes a watermark, is detected in the document, and there is a newer version of the picture with watermark at the server, the watermarked image is updated*); and an embedding unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding embedding functions*) that (1) updates, when a judgment result of the analyzing unit is affirmative, the predetermined information included in the piece of additional information (column 3, lines 29-39 and lines 47-51 of Evans – *if a picture, which includes a watermark, is detected in the document, and there is a newer version of the picture with watermark at the server, the watermarked image is updated*), and embeds the piece of additional information including the updated predetermined information into the first image data at a location where the piece of additional information is originally embedded, by referring to the stored location information (figure 1(30,30'); column 2, lines 61-65; and column 3, lines 14-26 of Evans), wherein the first image data embedded with the predetermined information and/or the new piece of additional information is outputted as the second image data (column 3, lines 23-28 of Evans).

Evans does not disclose expressly that said embedding unit (2) embeds, when a judgment result of the analyzing unit is negative, a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional

information are embedded, by referring to the stored location information, the updated information being equivalent to the predetermined information.

Ikenoue discloses embedding a new piece of additional information including updated information into the first image data at a location that does not overlap locations where the detected pieces of additional information are embedded (figure 2(1st Generation) and column 6, lines 33-47 of Ikenoue – *new information added where there is no information for each new generation copy code when each generation of a copy is made; must be in new location since older generation codes already exist at their respective locations, or there is no copy code if copy is first generation*). Since both the updated information taught by Ikenoue and the predetermined information taught by Evans are watermarks containing particular information, the updated information taught by Ikenoue is equivalent to the predetermined information taught by Evans.

Evans and Ikenoue are combinable because they are from the same field of endeavor, namely the detection and updating of watermark data in document copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add any necessary predetermined information at locations where is not presently any additional information, as taught by Ikenoue. The motivation for doing so would have been to be able to manage the number of copies generated and prevent illegal copying, through the use of updated generational watermark data (column 2, lines 23-32 of Ikenoue). The predetermined information in Ikenoue is not updatable and Evans cites some conditions in which updating information at the location of the watermark would be undesirable (column 2, lines 48-53; and column 3, lines 29-30 and lines 52-57 of Evans). Therefore, it would have been obvious to combine Ikenoue with Evans to obtain the invention as specified in claims 1, 7, 13, 19, 20, 26, 27 and 28.

Further regarding claim 1: The apparatus of claim 1 is fully embodied in the apparatus of claim 7.

Further regarding claim 13: The apparatus of claim 7 performs the method recited in claim 13.

Further regarding claim 19: The apparatus of claim 7 performs the method recited in claim 19.

Further regarding claim 20: The apparatus of claim 7 executes the steps of the computer program recited in claim 20.

Further regarding claim 26: The apparatus of claim 26 is fully embodied in the apparatus of claim 1.

Further regarding claim 27: The method of claim 27 is fully embodied in the method of claim 13.

Further regarding claim 28: The computer-readable medium containing a program of claim 28 is embodied in the computer-readable medium containing a program of claim 20.

Regarding claims 3, 9, 15 and 22: Evans discloses that when the analyzing unit analyzes the detected pieces of additional information, the analyzing unit employs a predetermined embedding format used by the embedding unit (column 2, lines 36-39 and lines 47-53 of Evans – *watermark and watermark ID in set format embedded in image of particular format*).

Further regarding claims 5, 11, 17 and 24: Ikenoue discloses that, when the analyzing unit finds that any of the detected pieces of additional information is unanalyzable (column 13, lines 60-66 of Ikenoue), the analyzing unit judges that the piece of additional information does not include the predetermined information (column 14, lines 4-8 of Ikenoue). Blocks of additional data are analyzed to determine whether or not said blocks of additional data are invalid (column 13, lines 60-66 of Ikenoue). If said block of additional data are invalid, but said invalidity is not due to forgery, said invalid blocks are deleted (column 14, lines 4-8 of Ikenoue). Thus, said invalid blocks clearly do not have said predetermined information.

Further regarding claims 6, 12, 18 and 25: Ikenoue discloses that the predetermined information includes information about a date when the image data is processed (column 16, lines 21-22 and lines 33-34 of Ikenoue).

Regarding claim 29: Evans discloses an image processing apparatus (figure 1 of Evans) comprising: a detecting unit (figure 1(18) of Evans) that detects all pieces of additional information

(*detected picture, watermark and watermark ID data*) that are embedded in image data (column 2, lines 7-14 of Evans); a storage unit (figure 1 (16) of Evans – *or other inherently present computer memory needed to store information for processing (see column 4, lines 20-24 of Evans)*) that stores the detected pieces of additional information (column 2, lines 25-35 and lines 61-65 of Evans), the storage unit also stores location information indicating the location of where the detected pieces of additional information are embedded within the image data (column 2, line 61 to column 3, line 6 of Evans); an analyzing unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding analyzing functions*) that analyzes the detected pieces of additional information and judges whether any of the detected pieces of additional information includes predetermined information that is updateable (column 3, lines 29-39 and lines 47-51 of Evans – *if a picture, which includes a watermark, is detected in the document, and there is a newer version of the picture with watermark at the server, the watermarked image is updated*); and an embedding unit (figure 1(20(portion)) of Evans – *embodied software stored in computer-readable memory and executed by the processor, which performs corresponding embedding functions*) that (1) updates, when a judgment result of the analyzing unit is affirmative, the predetermined information included in the piece of additional information (column 3, lines 29-39 and lines 47-51 of Evans – *if a picture, which includes a watermark, is detected in the document, and there is a newer version of the picture with watermark at the server, the watermarked image is updated*), and embeds the piece of additional information including the updated predetermined information into the image data at the location where the piece of additional information is originally embedded, by referring to the stored location information (figure 1(30,30'); column 2, lines 61-65; and column 3, lines 14-26 of Evans).

Evans does not disclose expressly that said embedding unit (2) embeds, when a judgment result of the analyzing unit is negative, a new piece of additional information including updated information into the image data at a location that does not overlap locations where the detected pieces of additional

information are embedded, by referring to the stored location information, the updated information being equivalent to the predetermined information.

Ikenoue discloses embedding a new piece of additional information including updated information into the image data at a location that does not overlap locations where the detected pieces of additional information are embedded (figure 2(1st Generation) and column 6, lines 33-47 of Ikenoue – *new information added where there is no information for each new generation copy code when each generation of a copy is made; must be in new location since older generation codes already exist at their respective locations, or there is no copy code if copy is first generation*). Since both the updated information taught by Ikenoue and the predetermined information taught by Evans are watermarks containing particular information, the updated information taught by Ikenoue is equivalent to the predetermined information taught by Evans.

Evans and Ikenoue are combinable because they are from the same field of endeavor, namely the detection and updating of watermark data in document copying. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add any necessary predetermined information at locations where is not presently any additional information, as taught by Ikenoue. The motivation for doing so would have been to be able to manage the number of copies generated and prevent illegal copying, through the use of updated generational watermark data (column 2, lines 23-32 of Ikenoue). The predetermined information in Ikenoue is not updatable and Evans cites some conditions in which updating information at the location of the watermark would be undesirable (column 2, lines 48-53; and column 3, lines 29-30 and lines 52-57 of Evans). Therefore, it would have been obvious to combine Ikenoue with Evans to obtain the invention as specified in claim 29.

4. Claims 4, 10, 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US-6,577,746 B1) in view of Ikenoue (US-5,987,127) and Davis (US-3,760,159).

Further regarding claims 4, 10, 16 and 23: Ikenoue discloses a warning unit (figure 13(20) of Ikenoue) that issues, when the additional data is determined to be secret (column 19, lines 60-65 of Ikenoue) and the proper confirmation data is not entered (column 20, lines 3-4 of Ikenoue), a warning to the effect that the copying of the document would be illegal (column 20, lines 5-9 of Ikenoue).

Ikenoue further discloses using the analyzing unit to find if any of the detected pieces of additional information are unanalyzable (column 13, lines 60-66 of Ikenoue).

Evans in view of Ikenoue does not disclose expressly that said warning unit issues, when the analyzing unit finds that any of the detected pieces of additional data is unanalyzable, a warning to the effect that the piece of additional information is unanalyzable.

Davis discloses issuing a warning to the effect that a valid parity does not exist (column 6, lines 16-20 of Davis) in the digital input data (column 5, lines 64-68 of Davis).

Evans in view of Ikenoue is combinable with Davis because they are from similar problem solving areas, namely the verification of digital information. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to display a warning if the digital data cannot be read properly, as taught by Davis, and is therefore unanalyzable, as taught by Ikenoue. The motivation for doing so would have been to give the operator a visual notification that an error has occurred (column 6, lines 19-20 of Davis). Therefore, it would have been obvious to combine Davis with Evans in view of Ikenoue to obtain the invention as specified in claims 4, 10, 16 and 23.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Thompson whose telephone number is (571)272-7441. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A Thompson/
Primary Examiner, Art Unit 2625

05 March 2009